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EC Enlargement Negotiations

Farm Inputs Spur Asian Agriculture

Foreign
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This week's cover:

The tractor—such as the one used by this Indian farmer—is just one of the many inputs being utilized by Asian farmers to boost crop production. (Photo courtesy FAO).

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Agriculture Is Issue at EC Propose

Norwegian team at the membership talks. (Photos courtesy of the European Communities Information Service.)





The French delegation at the opening of the EC enlargement negotiations.

Major Talks on Enlargement



By DON PHILLIPS
*Foreign Regional Analysis Division
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The European Community enlargement negotiations—initiated with preliminary meetings in June—have now begun to take more concrete shape since the opening of ministerial sessions late in the summer. These sessions were held with the United Kingdom on July 21, and with the other three applicant nations (Ireland, Denmark, and Norway) on September 21 and 22. As the meetings have progressed and negotiators on all sides have further defined their positions, it has become more evident that problems related to the agricultural sector will be a significant issue in the negotiations.

As a result of the meeting with the United Kingdom in July, it was agreed that the EC Commission—the agency which initiates and implements EC policy—would conduct factfinding studies on five subjects: the consequences of the United Kingdom's adaption of the EC's Common Agricultural Policy (CAP), the significance of the CAP for New Zealand-U.K. trade in dairy products, the authentication of the English texts of EC documents, and the implications of the United Kingdom's Commonwealth sugar agreement.

The examination of the implications of the CAP with respect to milk, pig-meat, and eggs—requested by the United Kingdom with a view toward possible market difficulties—is to be undertaken by the EC Council of Ministers, the Community's decision-making arm in which members directly represent their governments. The problems raised by the United Kingdom with respect to the application of the Community's common external tariff will also be taken up by the EC Council, since the United Kingdom is presently seeking duty-free tariff quotas on a number of basic products.

In more recent meetings, the United Kingdom has proposed a 1-year initiation period between the conclusion of the membership agreement and the beginning of tariff reductions. However, this proposal is counter to the Community's position. Another U.K. request calls for some consultation with regard to policy issues currently being considered by the Community.

The United Kingdom has empha-

sized that the financial burden imposed by its entry into the EC will be a crucial factor in the negotiations; and the costs associated with the operation of the Community's agricultural policy make up the bulk of EC expenditures. In addition, public opinion in the United Kingdom has shown great concern with the rise in the cost of living that would result from high EC agricultural prices.

Negotiations relating to agriculture are likely to revolve around two key points. First, there is the question of the transitory measures to be adopted and the possibility of actual modification of the CAP. Although the EC has taken the position that the negotiations are to be limited to transitory measures only, the United Kingdom made an explicit reservation by asserting the possibility of employing other methods in solving the problems raised in negotiation. This situation obviously contains the seeds of conflict, depending on the determination of the Community to maintain its basic position as well as on the determination of the United Kingdom to seek exceptions.

Related to this issue is the question of the length of the transition period for the agricultural sector. The United Kingdom has proposed a relatively short (3-year) transition period for industry and a longer period for agriculture. However, the EC appears to be predisposed towards identical periods of transition for both.

Secondly, there is the problem of the modification of the recently adopted EC financing arrangement to allow for the entry of the applicant countries. The United Kingdom has recently submitted to the EC Commission estimates indicating a net U.K. cost of \$1.1 billion in 1978 if no change is made in the existing financing arrangement before that time. This estimate was tied to 1978, since the Community will then enter into the final stage of its financing agreement and will be entirely financed from its own sources of revenue (variable levies, customs revenues, a share of value-added tax, etc.).

The United Kingdom estimates that it will be paying 31 percent of the costs of operating the Community, while receiving only 6 percent of the benefits. It is doubtful whether a burden of this magnitude is acceptable to the British negotiators. Thus, the question becomes, what changes is the Community willing to make?



Members of the delegation from the United Kingdom to the talks in Luxembourg. Left, Sir Alec Douglas-Home, and, right, Anthony Barber, chief negotiator at the opening sessions. (Photo courtesy European Communities Information Service.)

Denmark and Ireland have indicated that adoption of the CAP should pose no major problems. Denmark has, in fact, requested as short a transition period as possible. Both countries, however, are concerned with developments affecting U.K. agriculture.

Norway, on the other hand, has indicated it would be necessary to maintain farm income at about the same level as at present. Norway's agricultural prices are considerably higher than the EC's, and the Norwegians estimate that adoption of the Community's prices would result in a 40-50 percent decline in Norwegian farmers' incomes. In their view, transitory measures will not be appropriate for Norway; and they seek some sort of permanent exception to the CAP. Norway has stressed that this would present only a marginal problem for the Community, as that country would account for only 5 percent of the agricultural production of an enlarged EC.

Norway has also expressed strong concern with the common fishery policy the EC is expected to adopt this autumn. The policy would entail opening territorial waters to all EC members, and Norway feels that the opening of its fiords to foreign fishing would endanger the employment level of the population along its coast.

The election of a new French Government in June 1969, following the resignation of President de Gaulle, paved the way for new negotiations.

Under the leadership of de Gaulle, France had vetoed the continuation of enlargement negotiations in 1963, and had also prevented the resumption of negotiations in 1967 when the United Kingdom again applied for membership to the Community.

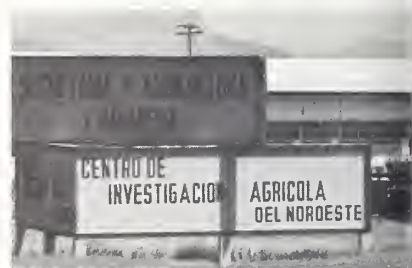
It was not until the Hague Summit Conference of Common Market Heads of State, on December 2, 1969, that a formal commitment was made to begin enlargement negotiations after completion of the essential preparatory work by the Community. The preparatory work consisted, on the one hand, of developing common positions on the major problems of the negotiations and, on the other, of developing the specific negotiating procedure to be used. After months of discussion, these preliminary tasks were completed on June 9, 1970.

There are several important differences to be noted when comparing the present discussions to past EC negotiations. In contrast to the 1961-63 negotiations on U.K. accession, when the EC member states each participated separately, the EC is this time participating as a single entity. The agreed negotiation procedure delegates all power, in principle, to the EC Council of Ministers. The Council is establishing the Community's position on all problems and negotiations at all levels are being chaired by the president of the Council.

The EC Commission, which had sought a greater role in the negotia-

tions, expressed disappointment with the negotiating role carved out for it. The Commission is to make proposals on all problems posed in the negotiations, to defend and explain the Community's position when called on by the Council, and to develop—in concert with applicant countries—possible solutions to specific problems raised in the course of negotiations when asked by the Council to do so. These responsibilities, as well as the expertise of the Commission, may actually give it substantial control over the course of the enlargement negotiations.

The major points of the EC's common position were presented by Belgium's Foreign Minister Harmel, president of the Council of Ministers for the first half of 1970, in his opening address of June 30. (*Foreign Agriculture*, July 27, 1970, p. 7.) The bulwark of the Community position, according to Mr. Harmel, is its insistence on the acceptance of the three treaties governing the



Farmers meeting at Mexican agricultural station (I.N.I.A. photo.)

Mexican State of Union Message Declares Farm Output Is Up

establishment of the European Economic Community, the European Coal and Steel Community, and Euratom, as well as all the decisions and regulations deriving from those treaties (including those decisions which might be made during the present negotiations).

From that stance follows the Community's position that the negotiations concerning the problems of adaptation for new members will take into account only transitory measures, not modifications of existing rules. The guidelines for these transitory measures have been laid down as follows:

- These measures will have a precise timetable and will begin with a significant tariff reduction as soon as the membership treaties come into force (these treaties are to come into force on the same date).

- The transitory measures will be determined so as to achieve a balance of reciprocal advantages.

- "Parallelism" between the progress

of the agricultural and industrial sectors must be ensured.

- The length of the transition period will be the same for all applicants in the field of trade; although in other fields, the length could vary.

With respect to developing countries, the Community stressed the continuation of the present association policy with the African states. It further suggested that negotiations for the extension of this policy to British Commonwealth African countries could take place at the same time as the renegotiation of the current agreement (August 1, 1973). It was indicated that guidelines for the non-African Commonwealth countries will be proposed as the important problems concerning Commonwealth negotiations are approached.

It was also suggested that a common standpoint be developed on generalized preferences. Such preferences, which would be granted to developing coun-

tries as a group rather than to specific countries, are currently being discussed in the U.N. Conference on Trade and Development and Organization for Economic Cooperation and Development forums. The EC also declared its willingness to open discussions with those European Free Trade Association countries which have not applied for membership. Most of these countries are seeking special relationships with the Community but are not prepared to accept full membership.

The EC promised to give its views on a number of problems—such as Euratom, the European Coal and Steel Community, and economic and financial problems linked with U.K. membership—at a later date in the negotiations. The Community also promised to eventually propose suitable procedures for informing the applicant nations of the development of other negotiations, since in the early stages negotiations will be essentially bilateral.



In the past 6 years, the value of Mexico's crop, livestock, and lumber production has increased by \$1.18 billion and its agricultural trade surplus has almost doubled during 1964-69. These were among the facts presented by Gustavo Díaz Ordáz in his recent State of the Union Address.

The President cited promotion of agricultural development as being one of the fundamental goals of his government. He said, "The progress achieved is reflected by the increased value of crops; in 1964, this was estimated at over \$2.09 billion while in 1970 it amounted to almost \$2.73 billion. If we add the amount represented by livestock and lumber production to this last figure, we find that the total increase in value in the last 6 years was more than \$1.18 billion." President Díaz Ordáz noted that agricultural and livestock production have increased by 30 per-

cent over the past 6 years.

Statistics in the President's address demonstrated that Mexico's favorable balance of trade in agriculture, livestock, and lumber products over the past 5 years (1964-1969) increased by \$336.2 million. Comparative import-export balances indicate that Mexico's trade surplus rose from \$423.3 million in 1964 to \$768.6 million in 1969. During 1969, he said, imports of agricultural products totaled \$216.2 million. Exports were \$984.7 million.

The Mexican Chief of State said that because of the disastrous agricultural cycle of 1969, one of the worst it has ever suffered, Mexico was forced to import some farm products, principally corn, to make up for production deficits. "We continue to hold that it is preferable to import, whenever this proves indispensable, rather than to maintain excessive reserves that, for

many reasons, can prove seriously damaging to our economy."

In his address, President Díaz Ordáz cited the following statistics:

- National livestock production, valued in 1964 at almost \$1.25 billion, is now estimated at well over \$1.76 billion. Exports have quadrupled.

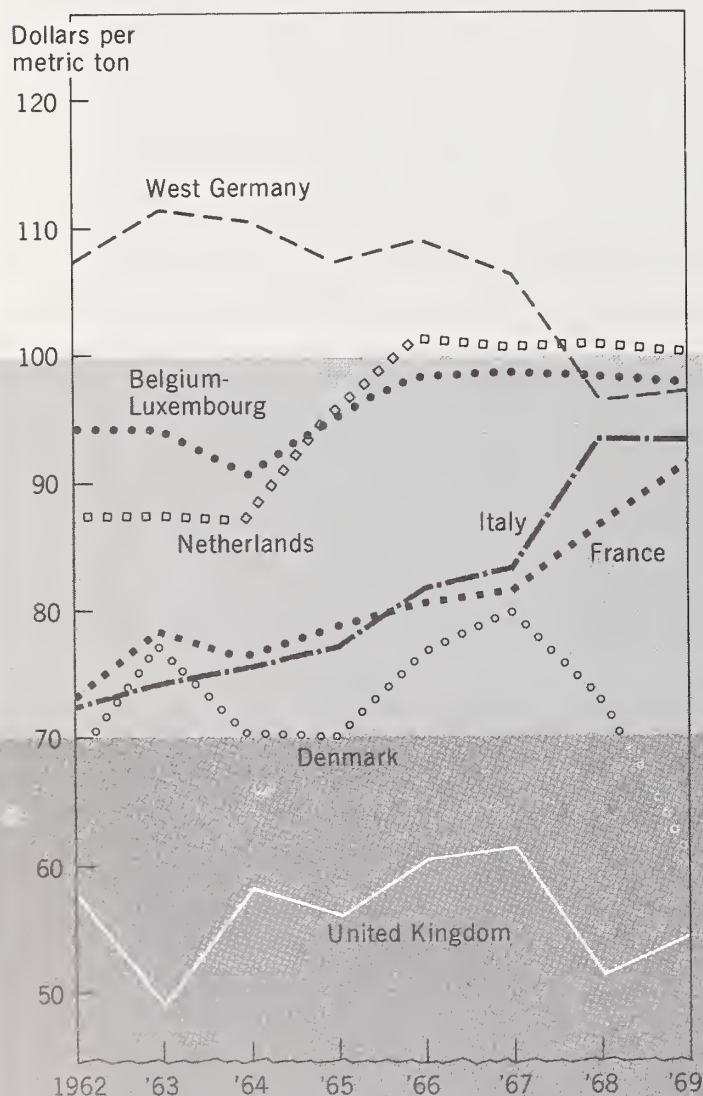
- Exports of livestock products, valued at \$45.2 million in 1964 have quadrupled to \$188.1 million.

President Díaz Ordáz stated that both production and use of fertilizer have increased. Production in 1969 reached 1.3 million tons worth \$96 million. This production was supplemented by 243,667 tons of fertilizer products from other sources. Total sales were \$128.0 million. Fertilizer consumption, the President said, has increased by almost 70 percent during the past 6 years and 95 percent of the country's demand is being met by national production.

Feedgrain Costs, Grain Consumption, and Meat Prices in Europe

By KOY L. NEELEY
Grain and Feed Division, FAS

FEED BARLEY PRICES PAID BY FARMERS



When grain prices are held at artificially high levels, what happens to the utilization of feedgrains and prices paid for meat? Although no hard and fast conclusions can be drawn from the interrelations of the trends shown in the accompanying charts, some interesting coincidences can be pointed out. Countries for which information is given are the present Common Market members plus two possible future members—the United Kingdom and Denmark.

The first chart in the series, on this page, compares feed barley prices in the various countries since 1962, when the common agricultural policy (CAP) for grains was established in the European Communities (EC). Feed barley was picked for illustration because it is a common European feedgrain and because its price affects those of other domestic and imported feedstuffs. Note that the United Kingdom and Denmark have had the lowest prices and prices that have remained relatively stable during the period. Germany has had the highest prices except for the marketing year 1968-69, when Italy's were the greatest. (Corn, however, and not barley, is the common Italian feedgrain.)

In general, barley prices increased over the 1962-69 period in most EC countries but declined in Germany and changed little in the non EC countries—Denmark and the United Kingdom. With divergent price trends in the two sets of countries, comparisons of trends in grain usage for animal production and of meat prices may be instructive.

A second chart on the opposite page shows grain consumption per gross livestock unit in each country since the establishment of the grain CAP in the Common Market. It gives a measure of how intensively farmers use grain in livestock feeding—not how much grain is consumed in total. A gross livestock unit is an EC statistical concept (employed by the Statistical Office of the European Communities) based on the number of calories or grams of starch eaten by an animal. Under this system a mature dairy cow counts as 1 unit, an animal being fed for beef 1.2 units, a calf under 1 year 0.4 unit, a pig (depending upon age and sex) 0.2 to 0.3 unit, a sheep or goat 0.1 unit, a horse 1 unit, a mule or donkey 0.9 unit, and poultry 0.004 unit each.

The gross livestock unit has some shortcomings as a method of accounting for grain use by livestock. First, various types of livestock differ in their grain requirements and in their abilities to utilize nongrain foodstuffs such as beet pulp, oil-cake, and roughages. Also, gross livestock units are keyed to treating animals as feed-consuming units rather than as grain-consuming units. However, considering the feeding systems in Europe, gross livestock units are a plausible concept.

Grain-consumption summaries

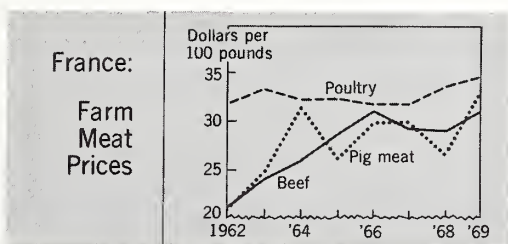
Belgium-Luxembourg.—Grain use per animal unit has changed less in Belgium and Luxembourg since the initiation of the grain CAP in 1962 than in other EC countries. Wheat and feed barley prices rose only slightly during the 1962-69 period (though corn and grain sorghum prices increased sharply). Although swine numbers expanded, grain consumption per gross livestock unit remained near even despite a decrease in horses. Grain use fell to its lowest from 1962 to 1964 and then rose to a high point around 1967. The upward trend in grain consumption since 1966 occurred during a period of noticeably strengthening prices for beef and pork.

West Germany.—In 1962 West Germany had by far the highest grain prices of any of the countries included in this

study. Since then grain costs to livestock farmers have declined somewhat and consumption per gross livestock unit has shown a gradual but steady upward trend. Part of the increase in grain consumption per animal unit has been caused by a relative gain in poultry and swine numbers, which are large grain consumers, and a decrease in numbers of horses and sheep, which are fed chiefly nongrain foodstuffs. Also, feeding of potatoes declined sharply. Germany did not have as sharp an increase in swine, however, as occurred in Denmark, Belgium, the Netherlands, and Italy.

Beef and pig meat prices, already high in 1962, have advanced less than in other EC countries. And prices for poultry meat have declined noticeably.

France.—Although France is the largest producer of grain in the EC, its grain consumption per livestock unit was the lowest in 1962 and remained the lowest through 1969. One reason is that cattle and sheep, which under the EC meat-price system are fed little grain, make up almost 85 percent



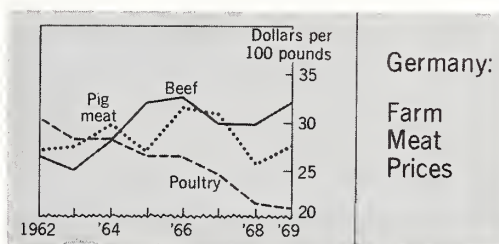
of gross livestock units—a higher percentage than in any other EC country. Another reason is that French grain prices (except for corn) were the lowest of those in the EC countries when the grain CAP went into effect in 1962 and since then have risen substantially and deterred increased feedgrain use.

Nevertheless, grain consumption per gross livestock unit has risen steadily in France since 1962—possibly in response to higher meat prices.

Netherlands.—Unlike in any other country in this study, grain consumption per animal unit generally declined in the

Netherlands between 1962 and 1969 despite a temporary upsurge in grain use in 1963 to 1964 that coincided with a strong increase in beef and pig meat prices.

The Netherlands, like Denmark, is a highly efficient raiser

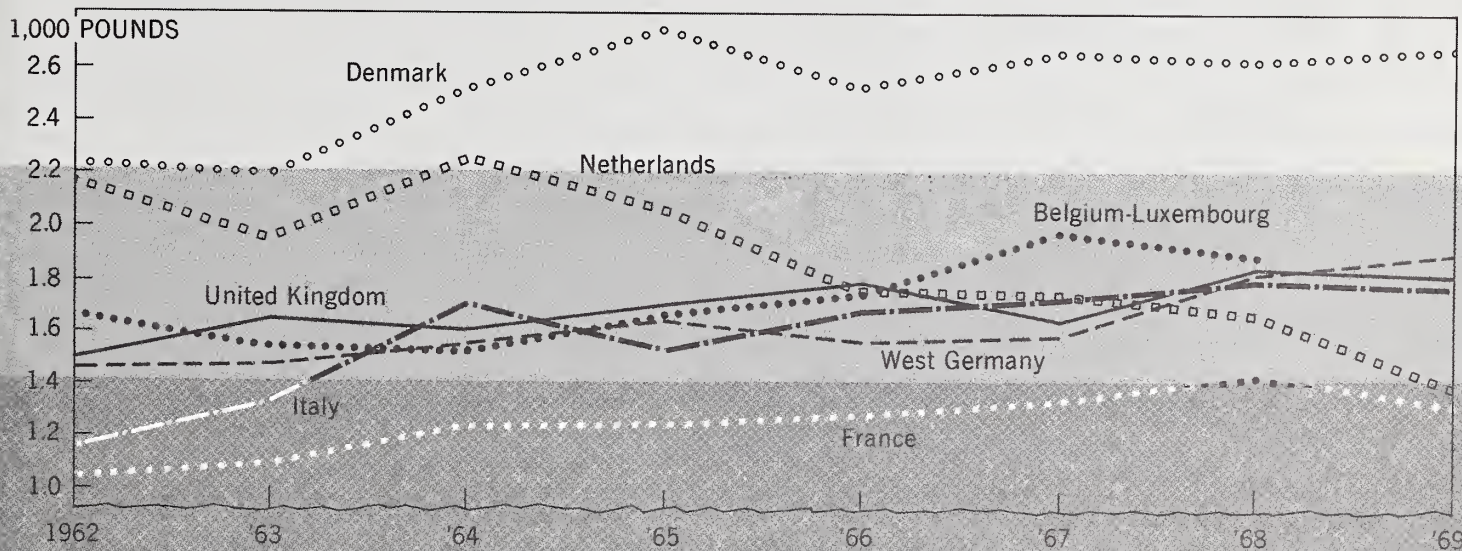


of livestock and an exporter of livestock products. When feedgrain prices rose after the grain CAP was introduced, Netherlands farmers began using less expensive grain substitutes or mixed feeds that contained high proportions of non-grain feedstuffs to maintain their profits. (Note on the chart on the following page that while the price of pig meat in the Netherlands has risen somewhat, that for poultry has held remarkably steady. Beef prices also rose.) The decline in the use of feedgrains is all the more remarkable in that it took place during the same period during which the Netherlands had a strong swing toward more poultry and swine (intensive grain users) but less cattle (nonintensive grain users).

The Dutch mixed feed industry, which uses computers extensively to determine least-cost acceptable feed mixes, makes considerable use of such nongrain feed components as corn gluten, feed peas, manioc, and beet pulp. Another factor tending to increase the use of nongrain feedstuffs for livestock consumption is the relative ease with which such materials can be imported through the large and efficient ports available in the country.

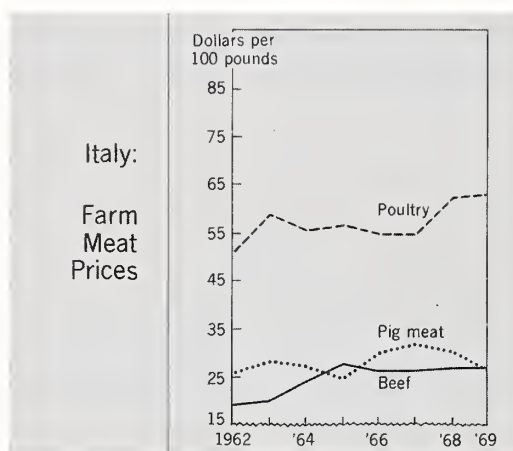
However, indications are that during the next year or so increased grain use per gross livestock unit may occur. The mixed feed industry feels that substitution for grain has been carried a little past the most practical level.

GRAIN CONSUMPTION PER GROSS LIVESTOCK UNIT^{1/}



^{1/}See text for explanation of gross livestock unit.

Italy.—Grain use per livestock unit has advanced more rapidly in Italy, beginning from a very low level, than in any other country mentioned. Corn, the chief feedgrain, has had special price concessions by the Common Market, and its price has risen less rapidly in Italy than in other EC countries. At the same time, the livestock industry has expanded rapidly—especially in the production of poultry and swine—and has spurred feedgrain use. During all the period analyzed meat prices have been high in Italy and generally rising. (The remarkably high poultry meat prices shown for Italy are probably due chiefly to inefficiency in some aspects of pro-

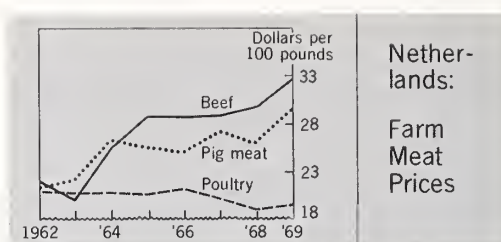
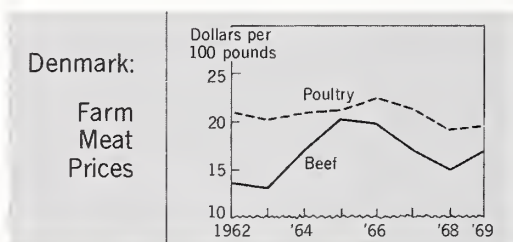


duction and bottlenecks in distribution; but rising feedgrain prices contributed to the situation.)

United Kingdom.—Like France, the United Kingdom has a large proportion of its gross livestock units (86 percent) in sheep and cattle and a rather small part of the total (13 percent) in swine and poultry. Also like France, a larger ratio of cattle are for beef than in most European countries. This livestock population mix tends to keep grain consumption per animal unit down. Nevertheless, the grain consumption per gross livestock unit in the United Kingdom has been the second highest for several years of all the countries studied and the trend has been steadily upward.

Low feedgrain prices (the lowest of all the countries listed) have apparently encouraged livestock raisers' grain utilization in spite of meat prices that are much lower than those in EC countries. It is also interesting to note that since 1962 meat prices in the United Kingdom have risen only slightly.

Denmark.—Although, like the Netherlands, Denmark is an important producer and exporter of livestock products, the grain consumption trend per animal unit has followed a contrasting course. In 1962 consumption per animal unit was only slightly higher than that in the Netherlands; in 1969 it



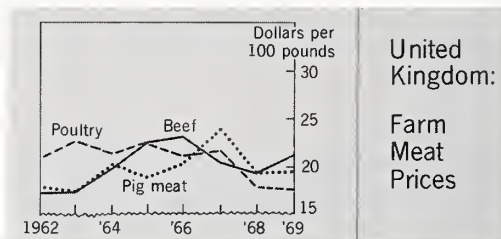
was nearly twice as great. While utilization of feedgrains fell in the Netherlands, it rose in Denmark. Part of the increase was probably due to a decline in the proportion of cattle in gross livestock units (from 62 percent in 1962 to 58 percent in 1968) and an increase in the share of hogs (from 33 percent in 1962 to 39 percent in 1968) accompanied by a sharp decline in horses—a swing toward more intensive grain users.

Grain consumption increased most rapidly during 1963-65—years of increasing prices for beef and pork.

As in the United Kingdom, meat prices have risen less than in the EC countries during the period analyzed. Low feedgrain prices played a major role.

Grain use and meat prices

Grain consumption for animal feed has trended steadily upward in most EC countries and in the United Kingdom in recent years. But if grain prices continue to rise in EC countries, feedgrain utilization may either remain static or possibly even decline unless meat prices increase sufficiently to offset greater feed costs to livestock raisers. Some countries may follow the example of the Netherlands, though to a lesser degree, in substituting cheaper feed components for grain. France, because of its preponderance of cattle and sheep and traditional grass fattening of beef cattle, will probably remain below other EC countries in feedgrain use per livestock unit. The Netherlands should increase its use of feedgrains from its



present low level; but, because of the availabilities of grain substitutes and the organization of the Dutch feed-manufacturing industry, utilization may remain lower than in most other Common Market countries.

What will happen to feedgrain use per livestock unit in Denmark and the United Kingdom if those countries join the Common Market will depend largely upon the conditions stipulated when they enter. If grain prices rise to Common Market levels, consumption per livestock unit in Denmark will probably fall sharply. The Danes will tend to follow the pattern of grain usage in the Netherlands. Although the United Kingdom would be less drastically affected, its grain utilization would probably also slide and its meat prices would almost certainly rise.

French Grain Exports Near 1969 Record

French grain exports during fiscal 1970 (July-June), at 12.1 million metric tons, nearly equaled last year's record. A slight increase in exports of wheat and wheat flour was offset by decreased exports of feedgrains. Wheat exports to EC partners decreased 13 percent to 2.2 million tons, with the sharpest drop in shipments to West Germany—from 1.2 million tons in 1968-69 to 825,000 tons in fiscal 1970. A threefold increase in wheat exports to Mainland China—to 779,000 tons—was the largest single gain.

Feedgrain exports were off by 2 percent to 5.9 million tons after a 51-percent increase a year earlier. Gains totaling 352,000 tons were made in shipments to Eastern Europe and non-EC West European countries. However, feedgrain exports to EC partners decreased by 291,000 tons. Asia, Africa, and the Western Hemisphere takings were off by 200,000 tons.

Barley exports increased to nearly 3.6 million tons, 60 percent of total feedgrain exports. A sharp setback in sales to Japan—from 494,000 tons in 1968-69 to 287,000 tons in 1969-70—occurred as other traditional exporters regained much of this market from heavily subsidized French exports. Significant gains were made in exports of

barley to Poland, the United Kingdom, and Norway. Corn exports, however, were 185,000 tons below the previous year. Exports of oats and sorghum were also down.

French imports of grain in July-June 1969-70 dropped to 1 million tons, the lowest level in recent years. Imports of wheat declined from 597,000 tons to 473,000 tons, a decrease of 21 percent. U.S. takings were reduced sharply from 412,000 tons in 1968-69 to 293,000 tons in 1969-70, still a 62-percent share of the market.

Feedgrain imports were also down slightly from the previous year. The United States showed significant gains, with corn imports totaling 381,000 tons, for a 79-percent share of all feedgrain imports in 1969-70. This was an increase of 21 percent for imports of corn from the United States.

More U.S. Cattle Headed for Brazil

U.S. exports of dairy cattle breeding stock to Brazil have shown a healthy increase this year compared with the past 2 years. Exports amounted to 80 head in 1968 and 167 head last year. Through August of this year, approximately 200 head were shipped, with additional sales pending.

The majority of the animals purchased by Brazilian breeders have been Holsteins, but recently 30 Guernseys were purchased and delivered to the São Paulo area.

The total Brazilian Holstein import market is about 3,000 head per year. These are mostly bred grade heifers imported from Argentina and Uruguay.

Imports of bred Holstein heifers from North America have been held down over the years because they are less resistant to tick fever than cattle from countries where that disease is present. Tick fever results in high abortion rates, lowered fertility, and death losses. Cattle imported from countries having tick fever do not normally have these problems because they are exposed to the disease at an early age when the probability of recovering from it is greater.

The larger Brazilian dairy cattle

U.S. and Brazil Negotiate Cotton Agreement

The United States and Brazil recently reached an agreement on guidelines for negotiating a bilateral agreement covering the export of Brazilian cotton textiles to the United States. All major issues were settled, but some minor ones, principally ceilings on individual categories, remain to be worked out during a negotiation beginning October 5, 1970, in Brasilia.

The agreement will be in effect for 5 years, beginning October 1, 1970. For the first year, Brazilian exports to the United States of all products containing cotton cannot exceed 75 million square yards equivalent. Within this aggregate limit, limits on groups and categories will be applied. For the second and subsequent years of the agreement ceilings will be increased 5 percent per annum.

Cotton textiles shipped from Brazil to the United States on and after October 1, 1970, will be counted against the levels of the agreement. Goods in embargo will be counted against the level of the first year of the agreement and will be released from embargo as soon as the agreement is concluded by the two countries.

California Merger of Marketing Cooperatives

Two California cooperatives, California Cannery and Growers and Tri-Valley Growers, recently merged export efforts by forming a new organization called "California Valley Exports." The new organization will market products of the two farmer cooperatives in Western Europe, the United Kingdom, and Scandinavia.

The cooperatives are owned by more than 1,700 California and Wisconsin farmers with annual sales of about \$195 million in farm products.

Feedgrain Costs Push Up U.K. Chicken Prices

A sharp rise in U.K. poultry feedgrain prices will force up chicken prices, warned the British National Association of Poultry Packers on September 16. The Association pointed out that feed is the biggest single expense in broiler production and accounts for about 60 percent of total production costs for British poultry farmers.

Already this season, feed costs have risen by about \$19.20 per ton. Nevertheless, the Association recognizes that strong competition within the industry, which is constantly on the brink of overproduction, may temper rises in the retail price of broiler chickens. In 1969, the United Kingdom produced 10 million metric tons of feedgrains and imported 1.8 million from the United States—both production and imports were up over 1968.

breeders are thinking of importing young open heifers from North America. If a recent, large importation of open heifers from the United States recovers satisfactorily from its initial exposure to tick fever, additional larger purchases of these animals may be made in the future.

IMPORTED SEED, HELP ASIANS

By JOHN B. PARKER, JR.
*Foreign Regional Analysis Division
Economic Research Service*



Above, West Pakistan desert land being machine plowed before seeding. Right, the traditional form of plowing power on the Indian Peninsula.



Left, farmer controls flow of water into channel of a newly installed irrigation and drainage system, India. (Photos courtesy of FAO.)

To many farmers in southern Asia there is an almost magical formula which enables them to play a role in the "Green Revolution." Its elements are high-yielding seed, fertilizer, ample water, and farm machinery. The fortunate ones—those who have some of these inputs available—have increased their incomes perhaps higher than they have ever been. The less fortunate ones are demanding more inputs so that they too may benefit. While the Green Revolution has shown the results that can be achieved by using newly developed seeds with plant nutrients and mechanical devices, their demands are not of recent birth.

In the past decade, fertilizer use in countries in southern Asia more than tripled. Use of tractors, pesticides, irrigation equipment, and various other types of farm machinery also increased in the 1960's. The rate of growth in fertilizer use is slowing down in a few countries—particularly in India—but the rapid pace continues in most of the other nations of the area. The majority of these countries depend heavily on imports. In 1968, imports of fertilizer and tractors by countries in the area were more than triple the 1960 level.

The countries of the area are trying to cut their imports by constructing fertilizer and tractor factories and new building is underway from Afghanistan to the Philippines. India currently accounts for over one-half of the fertilizer and three-fourths of the tractors manufactured in the region. The addition of new tractor factories in Pakistan and Thailand has done little to quench their need for imported machines.

The shortage of foreign exchange by most countries in southern Asia is a

MACHINERY, FERTILIZER BOOST FARM OUTPUT

limiting factor in meeting the area's booming demand for imported inputs. Even farmers with local currency cannot be supplied until foreign exchange is available. While the new fertilizer factories will help alleviate the situation, they are not the complete answer. Certain ingredients and some types of fertilizers—which cannot be produced domestically—will still be imported.

Total imports of manufactured farm inputs by the countries of southern Asia range between \$350 million and \$550 million annually. Imports of fertilizer by the region jumped from \$120 million in 1963 to \$335 million in 1968, and declined slightly thereafter. During the same period imports of farm machinery increased by \$43 million.

The expansion in U.S. shipments of fertilizer to India through commodity loans by the Agency for International Development from 1963 to 1968 accounted for a large part of the area's growth in total fertilizer imports.

The United States supplied about two-fifths of the fertilizer imported by southern Asia 1968. U.S. exports of fertilizer to the area jumped from \$5 million in 1960 to \$131 million in 1968 and fell to \$98 million in 1969. Exports to India declined from \$102 million in 1968 to \$55 million in 1969. Large exports to Pakistan and South Vietnam helped to partially offset the decline in shipments to India. New markets for U.S. phosphate fertilizer during the last 2 years included Ceylon and Afghanistan.

Growth in farm production in Asia is increasingly dependent upon the use of more manufactured inputs, irrigation, improved seeds, and multiple cropping. The populations of countries of southern Asia are increasing by a greater number each year than the total population of California. Population is growing more rapidly than the area of cropland needed to feed the additional people, and efforts to improve yields will intensify in the future.

Top, power hand tiller being used in Malaysian rice field. Middle, farmer applies fertilizer to growing rice. Bottom, Indian farmer receives bag of certified high-yielding variety rice seed.
(Photos courtesy of FAO.)

Fertilizer use in southern Asia, and the results being achieved by its use, vary from area to area. The rate of growth in fertilizer use in northern India has slowed down recently because most of the progressive farmers with tractors and irrigated alluvial soils have already been included in Package Programs which call for increased yields, high wheat prices, expansion of irrigation, and higher profits from higher yields and multiple cropping.

The Government is now trying to get these farmers to increase the amount of fertilizer they apply per acre. Intensive cultivation of some new varieties has resulted in heavy removals of phosphate and potash from the soil in West Pakistan and northern India.

In India, irrigated land planted in high-yielding varieties of cereals for export has a higher priority for fertilizer than the vast areas of nonirrigated land. Most of the fertilizer distributed in the country through 1968 went to farmers located in irrigated areas and districts included in the Intensive Agricultural Districts Program.

Fertilizer prices are usually controlled or subsidized in southern Asia. Farmers in India pay a little less per ton of fertilizer nutrients than those in the United States. The imposition of a 10 percent excise tax on fertilizer sales in India apparently caused some farmers to lower their application rate.

Fertilizer use in Nepal is spreading to new regions. The use of fertilizer in Afghanistan has become significant in the production of high-yielding varieties of wheat.



More farmers in Burma are using fertilizer on rice, including phosphates from the United States. Thai farmers still use very little fertilizer for traditional varieties of rice. However, the use of fertilizer is expanding rapidly in Thailand on plantings of corn, tobacco, kenaf, and vegetables.

The demand for tractors has expanded rapidly in southern Asia as programs to increase yields have been intensified. It has been estimated that over 100,000 farmers in the area are waiting with cash to purchase four-wheel tractors, 65,000 in India alone. The shortage of foreign exchange delays their importation. Retail prices for 35-horsepower tractors assembled in India and Pakistan range between \$2,900 and \$4,000 each. Prices for smaller models imported from the USSR range between \$1,200 and \$2,000.

About 18,000 tractors were assembled in India in 1970 compared with 4,000 in 1965. Some 2,000 tractors will be assembled in West Pakistan this year.

Exports of tractors by the United States to southern Asia have exceeded \$30 million annually in recent years, with shipments to the Philippines and Thailand valued at more than \$8 million each. India, Singapore, and Pakistan are also important export markets for American tractors. The leading U.S. exports to Burma, Cambodia, and Laos in recent years has been tractors.

Irrigation machinery

Manufacturers of irrigation pumps, pipes, and other equipment in Western Europe, Japan, and the United States have found an expanding market for their products in southern Asia. India and the Philippines each imports over \$10 million worth of pumps and irrigation equipment annually. India's leading suppliers are Japan, Italy, West Germany, and the United States.

Japan's exports of irrigation equipment to Southeast Asia are rising rapidly, with shipments to Thailand and Indonesia valued at over \$2 million each.

Insects flourish in the warm climate where major crops are grown in southern Asia, and where frost is rare. Dry weather does serve as a deterrent to some insects during part of the year in some areas. Farmers in southern Asia use insecticides to control pests on over 150 million acres of cropland. Use by rice, cotton, and vegetable farmers has increased greatly in the last 5 years.

Imports of pesticides by the coun-

tries of southern Asia approximate \$50 million annually. Pakistan is usually the leading importer; local manufacturers can't meet the demand for insecticide by rice and cotton farmers.

Exports of U.S. insecticides and ingredients for use by pesticide distributors in southern Asia in 1969 were valued at \$16 million. The major markets were Pakistan, Thailand, and India.

Roundup by country

Increased usage of farm inputs has received great emphasis in *India*. Fertilizer use tripled between 1963 and 1969, increasing from 588,000 nutrient tons to 1.8 million tons. Imported fertilizer will account for about half of the supplies this season, compared with 70 percent in 1967-68.

Fertilizer use in 1970-71 is expected to reach 2.0 million nutrient tons. The revised target for fertilizer distribution at the end of the Fourth 5-Year Plan in 1973-74 is 4.1 million nutrient tons. The plan calls for constructing new fertilizer plants at certain sites along the Indian coast.

Output of nitrogenous fertilizer went from 237,000 nutrient tons in 1965-66 to almost triple that level in 1969-70. Production of phosphate fertilizer increased from 118,880 tons in 1965-66 to about double that in 1969-70.

Investments by American firms and by Japanese and international agencies in new fertilizer plants in India contributed to the dramatic increase in domestic production. The large fertilizer complex at Trombay, near Bombay, is scheduled to greatly expand output. New plants are scheduled to contribute over 500,000 nutrient tons of fertilizer between their opening and 1973-74.

Imports of nitrogenous fertilizer declined from 865,000 nutrient tons in 1967-68 to less than 550,000 nutrient tons in 1969-70.

The United States supplies most of India's manufactured fertilizer containing phosphate, especially ammonium phosphate. India receives nitrogenous fertilizer in substantial quantities from at least a dozen countries. Urea, a fertilizer containing 46 percent nitrogen, is supplied by about 15 countries. The leading sources of India's imports of urea in 1969-70 were Japan, the United States, Poland, Bulgaria and the USSR.

The demand for tractors has been enhanced by Package Programs. Farmers within a 250-mile radius of Delhi own over 75 percent of India's 110,000

farm tractors. Mechanical threshers are now used to separate the grain from the straw for over 90 percent of the wheat crop.

Assembly of tractors at Bombay and Faridabad expanded rapidly in the last 2 years assisted by investments by American firms. Output at Faridabad is scheduled to exceed 12,000 units in 1971, including some 45-horsepower Ford models. Assembly of tractors at Bombay increased from 1,300 units in 1965-66 to about 5,000 in 1969-70.

Pesticides are used to protect plants on over 125 million acres. Pesticides have helped to reduce losses in India's new storage facilities. Hundreds of new cold storage plants help farmers to hold crops until they can be marketed.

In *Pakistan* the use of farm inputs continues to expand rapidly in irrigated areas where high-yielding varieties are popular. Farmers in West Pakistan harvested over 7 million acres of high-yielding varieties of wheat and about 1.5 million acres of rice varieties developed at Los Baños, the Philippines.

Pakistan building factories

New plants in West Pakistan, which manufacture fertilizer from natural gas byproducts, have contributed to the rise in domestic output of nitrogenous fertilizer. Most of the phosphate fertilizers are still imported from the United States and Europe. The Japanese are helping to construct additional factories in East Pakistan.

Fertilizer use in 1969-70 approached 472,000 nutrient tons, more than double the level recorded in 1966-67. Fertilizer distribution in West Pakistan increased from 116,200 nutrient tons in 1966-67 to 337,800 tons in 1969-70, while use in East Pakistan rose from 75,800 tons to 135,000 tons.

Pakistan was a leading Asian market for imported farm machinery during the 1960's. Imports included \$1 million worth of American wheat combines in 1969. Imports of all farm inputs have exceeded \$60 million in some recent years. Over 90 percent of the tractors operating in Pakistan were imported.

The use of manufactured farm inputs in *Nepal* is still in the early phases and closely tied to the use of high-yielding varieties of wheat and rice. Imports of fertilizer from Japan, West Germany, and India are increasing, although the volume is still less than 30,000 nutrient tons per year. About

(Continued on page 16)

CROPS AND MARKETS SHORTS

Weekly Rotterdam Grain Price Report

Current offer prices for imported grain at Rotterdam, the Netherlands, compared with a week earlier and a year ago, are as follows:

Item	Oct. 7	Change from previous week	A year ago
	Dol. per bu.	Cents per bu.	Dol. per bu.
Wheat:			
Canadian No. 2 Manitoba	2.14	-1	1.93
USSR SKS-14	(¹)	(¹)	1.76
Australian Prime Hard	(¹)	(¹)	1.84
U.S. No. 2 Dark Northern Spring:			
14 percent	2.05	0	1.81
15 percent	2.07	0	1.89
U.S. No. 2 Hard Winter:			
13.5 percent	1.97	0	1.76
Argentine	(¹)	(¹)	(¹)
U.S. No. 2 Soft Red Winter ...	1.91	+2	1.54
Feedgrains:			
U.S. No. 3 Yellow corn	1.79	-2	1.42
Argentine Plate corn	1.98	+1	1.78
U.S. No. 2 sorghum	1.72	+1	1.43
Argentine-Granifero	1.74	0	1.48
Soybeans:			
U.S. No. 2 Yellow	3.32	+5	2.67

¹ Not quoted.

Note: All quoted c.i.f. Rotterdam for 30- to 60-day delivery.

U.S. Meat Imports in August

U.S. meat imports subject to the Meat Import Law during August 1970 totaled 112.8 million pounds, 20.4 percent below the August 1969 quantity of 141.8 million. Imports for January-August this year, at 803.5 million pounds, were 9.5

U.S. IMPORTS OF MEAT SUBJECT TO MEAT IMPORT LAW [P.L. 88-482]

Imports	August	January- August
	Million pounds	Million pounds
1970:		
Subject to Meat Import Law ¹	112.8	803.5
Total beef and veal ²	133.3	900.2
Total red meat ³	164.6	1,223.4
1969:		
Subject to Meat Import Law ¹	141.8	733.6
Total beef and veal ²	151.3	812.9
Total red meat ³	187.3	1,106.1
1968:		
Subject to Meat Import Law ¹	108.6	652.0
Total beef and veal ²	113.2	717.8
Total red meat ³	145.4	1,009.3

¹ Fresh, chilled, and frozen beef, veal, mutton, and goat meat.

² All forms, including canned and preserved. ³ Total beef, veal, pork, lamb, mutton, and goat.

percent above the 733.6 million that were imported in the same period a year earlier.

Reduced entries for consumption from Australia, Costa Rica, Mexico, Nicaragua, Ireland, Guatemala, Honduras, Panama, the Dominican Republic, and the United Kingdom (Northern Ireland) more than offset larger imports from New Zealand, Canada, and Haiti. Imports from the largest supplier—Australia—totaled 66.1 million pounds. New Zealand followed with 30.7 million pounds and Canada with 5.4 million pounds.

U.S. IMPORTS OF MEAT SUBJECT TO MEAT IMPORT LAW ¹ BY COUNTRY

Country of origin	August		Jan.-August		Change from 1969	
	1969	1970	1969	1970	August	Jan.- August
	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	Per- cent	Per- cent
Australia	100,136	66,095	387,710	402,945	-34.0	+3.9
New Zealand	20,134	30,688	147,534	148,822	+52.4	+9
Mexico	3,149	2,576	41,018	58,230	-18.2	+42.0
Canada	2,199	5,449	24,253	51,081	+147.8	+110.6
Ireland	6,179	2,285	36,041	39,742	-63.0	+10.3
Nicaragua	2,672	2,556	27,096	29,449	-4.3	+8.7
Costa Rica	1,534	97	25,771	26,653	-93.7	+3.4
Guatemala	2,008	1,835	16,181	18,637	-8.6	+15.2
Honduras	1,090	138	13,130	14,649	-87.3	+11.6
Panama	355	170	2,544	4,524	-52.1	+77.8
Dominican Republic	1,031	77	8,103	4,506	-92.5	-44.4
United Kingdom ...	1,173	723	3,357	3,410	-38.4	+1.6
Haiti	93	121	817	879	+30.1	+7.6
Total	141,753	112,810	733,555	803,527	-20.4	+9.5

¹ Fresh, frozen and chilled beef, veal, mutton, and goat meat. Excludes canned beef and other prepared or preserved beef products and meat rejected for consumption.

Canada's Second Oilseed Estimates

Canada's Dominion Bureau of Statistics estimates rapeseed production in 1970 at 71.6 million bushels, based on yields as of September 15. This is 10 percent less than in the first forecast, issued last month. Production, however, is expected to exceed last year's record outturn of 33.4 million bushels by 114 percent. The average yield, estimated at 18.1 bushels per acre, increased 9 percent from the 16.6 bushel average in 1969.

Flaxseed production was forecast at a record 47.8 million bushels, slightly above the first estimate and 74 percent above the 1969 crop of 27.5 million bushels. The average yield, at 14.2 bushels per acre, increased 20 percent from last year's 11.8 bushels.

Soybean production was estimated at 10.5 million bushels, 36 percent higher than the 1969 outturn of 7.7 million

bushels. Soybean yields are expected to average 31.2 bushels per acre compared with 23.8 bushels a year ago.

Sunflowerseed acreage increased to 61,000 acres from 48,000 acres planted in 1969. Production in Manitoba only was estimated at 44.0 million pounds, 29 percent above the 1969 crop. Production estimates for Saskatchewan and Alberta were not available.

Belgium To Import More Soybeans

Belgium's imports of soybeans in 1971 are expected to continue the upward trend of recent years, but imports of soybean meal probably will decline. Imports of soybeans in 1970 are estimated at an alltime high of 321,000 metric tons (11.8 million bu.) compared with 256,000 tons (9.4 million bu.) in 1969. Imports in 1971 are forecast at 355,000 tons (13.0 million bu.). Virtually all of the imported beans, about 98 percent of which are of U.S. origin, are processed in Belgium, in two extraction plants owned by one company which has been increasing its soybean processing steadily during recent years.

Imports of soybean meal also have increased in recent years because of the upward trend in livestock production—particularly hogs and, to a lesser extent, poultry. Imports in 1970 are estimated at 255,000 tons compared with 230,000 tons in 1969. But in 1971 imports may decline about 10 percent—to 230,000 tons. Less than one-half of Belgium's imports of soybean meal are from the United States; the greater share comes from nearby countries of the European Community, mainly the Netherlands. However, this meal is made largely from U.S. beans. Consumption is expected to level off due to the peaking of the hog cycle in 1970 or early 1971, and exports (mainly to France) have not been increasing as fast as Belgian production. It is becoming increasingly difficult for Belgium to export hogs and pork in excess of domestic requirements to France, the major export market for these Belgian products.

Imports of soybean meal from the United States in 1970 are estimated at 110,000 tons compared with 100,701 tons in 1969; 1971 imports are forecast at only 85,000 tons.

Barbados To Revamp Sugar Industry

A plan to improve the efficiency of the sugar milling industry in Barbados by closing a number of existing mills and improving others was announced on September 15 by the Barbados Sugar Producers Association. In order to put the plan into effect, a public company, Barbados Sugar Factories Limited (BSFL), has been registered. BSFL is to acquire all the assets and liabilities of the 17 existing privately owned factories. Fourteen of these produce dark crystal sugar and three produce fancy molasses.

The BSFL has suggested that the Government make loans to help peasant farmers buy shares in the new company, using money from the Sugar Stabilization Fund to which the peasant farmers have contributed. The initial plans of the BSFL are to close down three existing factories producing dark crystal sugar and one fancy molasses factory by 1971. The new plan will attempt to increase output per acre, rather than sugarcane acreage, since almost all of Barbados' arable land is already in sugarcane.

Canadian Tobacco Crop Lower

The Tobacco Growers' Marketing Board recently estimated the 1970 crop of flue-cured tobacco in Canada at about 190 million pounds green weight, nearly 51 million pounds less than was marketed from the 1969 crop. The 1970 crop is estimated at 175 million pounds in the major producing area of Ontario, 5 million pounds in the Maritime Provinces, and about 9.5 million pounds in Quebec.

The Ontario crop was 98 percent harvested by September 16, one of the earliest harvests by growers in recent years. Auction markets to sell this year's crop are expected to open early in November. The 1969 flue-cured tobacco production was a record quantity that brought at auction an average of 61.4 U.S. cents per pound. The previous 1968 crop brought an average 65.9 U.S. cents per pound.

Large Canned Fruit Pack in Italy

Malaysia reports larger 1969 packs of canned pineapple and pineapple juice. Pineapple production is estimated at 3.3 million cases (case contains 45 lb.), 6 percent above 1968. The juice pack is estimated at 66,000 cases.

The United Kingdom, the United States, Canada, and West Germany are the main markets for Malaysian canned pineapple. The Middle Eastern countries, Singapore, and the United States are the largest pineapple juice markets.

MALAYSIAN CANNED PINEAPPLE PRODUCTION

Year	Canned pineapple 1,000 cases ¹	Pineapple juice 1,000 cases ¹
1966	2,842	58
1967	3,079	63
1968	3,124	50
1969	3,322	66

¹ Case holds 45 lb.

Large Canned Fruit Pack Italy

Favorable weather conditions contributed to the largest Italian canned deciduous fruit pack in recent years. Production is estimated at 4.5 million cases (each holding 24 cans, size 2½), 23 percent above 1969. Reports indicate a record pear pack of 2.4 million cases, 9 percent above last year's. Cold weather during fruit setting held the fresh clingstone peach crop below normal. The canned peach pack is estimated at 833,000 cases, sharply above the 1969 pack but below the average pack.

Larger 1970-71 season exports are forecast. In 1969-70, exports of canned pears were an estimated 2.2 million cases,

ITALIAN CANNED DECIDUOUS FRUIT PRODUCTION

Item	1967 1,000 cases ³	1968 1,000 cases ³	1969 ¹ 1,000 cases ³	1970 ² 1,000 cases ³
Pears	1,371.8	1,763.7	2,253.6	2,450.0
Mixed fruit	440.9	588.0	735.0	882.0
Peaches	867.1	1,224.8	489.9	833.0
Cherries	196.0	196.0	147.0	196.0
Apricots	78.4	49.0	24.5	122.0
Other	49.0	49.0	49.0	49.0
Total	3,003.2	3,870.5	3,699.0	4,532.0

¹ Revised. ² Forecast. ³ Case contains 24 cans, size 2½.

29 percent above the 1.7-million-case total in 1968-69. Peach exports, however, were minimal in 1969-70—estimated at 69,000 cases, the lowest level in recent years—owing to the short 1969 peach pack.

ITALIAN SUPPLY AND DISTRIBUTION OF CANNED PEARS

Item	1967-68	1968-69	1969-70 ¹	1970-71 ²
	<i>1,000 cases³</i>	<i>1,000 cases³</i>	<i>1,000 cases³</i>	<i>1,000 cases³</i>
Beginning stocks (Aug. 1)	—	—	—	—
Production	1,371.8	1,763.7	2,253.6	2,450.0
Imports	.7	—	—	—
Total supply	1,372.5	1,763.7	2,253.6	2,450.0
Exports	1,316.6	1,675.0	2,155.6	—
Domestic disappearance	55.9	88.7	98.0	—
Ending stocks (July 31)	—	—	—	—
Total distribution	1,372.5	1,763.7	2,253.6	—

¹ Revised. ² Forecast. ³ Case contains 24 cans, size 2½.

ITALIAN SUPPLY AND DISTRIBUTION OF CANNED PEACHES

Item	1967-68	1968-69	1969-70 ¹	1970-71 ²
	<i>1,000 cases³</i>	<i>1,000 cases³</i>	<i>1,000 cases³</i>	<i>1,000 cases³</i>
Beginning stocks (Aug. 1)	—	—	49.0	—
Production	867.1	1,224.8	489.9	833.0
Imports	31.1	51.0	196.0	100.0
Total supply	898.2	1,275.8	734.9	933.0
Exports	210.8	566.3	68.6	—
Domestic disappearance	687.4	660.5	666.3	—
Ending stocks (July 31)	—	49.0	—	—
Total distribution	898.2	1,275.8	734.9	—

¹ Revised. ² Forecast. ³ Case contains 24 cans, size 2½.

Record Australian Canned Fruit Pack

Australia reports a record canned deciduous fruit pack despite late frost in the Goulburn Valley during peach blossoming. Production totaled 11.5 million cases, each containing 24 cans, size 2½. Record pear crops were evident in all major districts, providing exceptionally large volumes of Bartlett pears for canning. The 1970 pear pack is estimated at a record 4.4 million cases—over twice the short 1969 pack and considerably above average. Quality was good, and most of the fruit was suitable for canning as halves. Canned peach production, however, totaled only 3.9 million cases, the smallest pack since 1964. The Goulburn Valley recorded the lowest supplies of peaches for canning in some years, while other areas reported below-average supplies. Packs of all

AUSTRALIAN PRODUCTION OF CANNED FRUIT

Item	1967	1968	1969	1970
	<i>1,000 cases¹</i>	<i>1,000 cases¹</i>	<i>1,000 cases¹</i>	<i>1,000 cases¹</i>
Pears	2,797	3,206	1,795	4,384
Peaches	5,038	5,158	4,063	3,936
Two fruits	575	835	785	1,251
Fruit cocktail	698	1,011	732	1,098
Apricots	1,054	723	699	773
Fruit salad	133	56	51	45
Total	10,295	10,989	8,125	11,487

¹ Case contains 24 cans, size 2½.

other items except fruit salad were larger.

Early-season weather conditions have been favorable for 1971 crop development. Peach, apricot, and pear orchards have blossomed well and set is reported good.

Canned fruit exports are expected to exceed last season's but remain below the 1968 record. Total 1970 exports are forecast at 7.8 million cases, 46 percent above last season. Pear exports are forecast at a record 3 million cases, almost twice the 1969 level. Peach exports are forecast at 2.6 million cases, 4 percent above last year's but below the 1964-68 yearly average. The United Kingdom is the largest buyer of all Australian canned fruits. Peach exports to the important West German market during the first half of 1970 were sharply higher than during the same period of 1969.

AUSTRALIAN CANNED PEAR SUPPLY AND DISTRIBUTION

Item	1967	1968	1969	1970 ¹
	<i>1,000 cases²</i>	<i>1,000 cases²</i>	<i>1,000 cases²</i>	<i>1,000 cases²</i>
Beginning stocks (Jan. 1)	571	705	614	238
Production	2,797	3,206	1,795	4,384
Total supply	3,368	3,911	2,409	4,622
Exports	2,095	2,656	1,621	3,000
Domestic disappearance	568	641	550	600
Ending stocks (Dec. 31)	705	614	238	1,022
Total distribution	3,368	3,911	2,409	4,622

¹ Forecast. ² Case contains 24 cans, size 2½.

AUSTRALIAN CANNED PEACH SUPPLY AND DISTRIBUTION

Item	1967	1968	1969	1970 ¹
	<i>1,000 cases²</i>	<i>1,000 cases²</i>	<i>1,000 cases²</i>	<i>1,000 cases²</i>
Beginning stocks (Jan. 1)	996	814	359	420
Production	5,038	5,134	4,063	3,936
Total supply	6,034	5,948	4,422	4,356
Exports	3,657	4,112	2,502	2,600
Domestic disappearance	1,563	1,477	1,500	1,500
Ending stocks (Dec. 31)	814	359	420	256
Total distribution	6,034	5,948	4,422	4,356

¹ Forecast. ² Case contains 24 cans, size 2½.

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Foreign Agriculture

Farm Inputs Spur Asian Agriculture

(Continued from page 12)

150 tractors are imported annually.

Ceylon still imports all supplies of chemical fertilizer, tractors, and irrigation equipment. Imports of farm inputs increased during the late 1960's as the "Grow More Food" campaign was implemented.

Ceylon's imports of manufactured farm inputs range between \$23 million and \$30 million annually. The United Kingdom, Japan, Eastern Europe, and the United States were important sources of fertilizer imports in 1970. The value of fertilizer imports doubled between 1962 and 1968, and remained at high levels during the last 2 years. Fertilizer use is essential for improving yields of the hybrid varieties of rice, which cover over 70 percent of the total rice area.

Afghans' fertilizer use

Farmers in *Afghanistan* used about 15,000 nutrient tons of imported fertilizer in 1969 and larger supplies in 1970. A new fertilizer plant constructed by USSR should begin producing urea in 1972. The use of manufactured inputs by farmers in *Afghanistan* was rare 4 years ago. Fertilizer distribution increased markedly in 1970 because of greater use on high-yielding varieties of wheat, now sown on over 10 percent of the total wheat area.

The United States sent \$512,000 worth of phosphate fertilizer to *Afghanistan* in 1969. Japan is also sending fertilizer to the *Afghans*. Fertilizer is now subsidized by the Government. Prices paid by farmers are low.

Use of farm inputs in *Burma* is increasing moderately because of Government programs to boost rice production. Two new fertilizer factories are providing nitrogenous fertilizer, and imports of this type of fertilizer have declined. The United States sent 76,000 tons of phosphate fertilizer to *Burma* in 1968 for a value of \$4.6 million. *Burma* is importing fertilizer from West Germany and Japan.

Imports of farm inputs from the USSR and Eastern Europe declined in *Indonesia* in the late 1960's while those from Japan, West Europe, and the United States rose. The fertilizer factory near Palembang produced about one-third of the 120,000 nutrient tons of fertilizer distributed in 1967-68.

Indonesia receives about 3,000 imported tractors annually, mostly from Japan, West Germany, the United Kingdom, and the United States. The Dutch and Swiss supply a large part of the insecticides and tools.

About 5,500 tractors are imported by *Thailand* annually and some garden tractors are assembled locally. Approximately 30,000 four-wheel tractors are in use in the country.

Total fertilizer use in 1970 is expected to reach 100,000 nutrient tons.

The spread of high-yielding varieties of rice to over one-fourth of the *Philippines* rice fields has created a larger demand for fertilizer. Farmers are also using substantial supplies of fertilizer for sugarcane, tobacco, coconuts, fruits, and vegetables. Total use of fertilizer now exceeds 150,000 nutrient

tons annually, with nitrogenous types accounting for slightly more than half the total.

Singapore is an important transit trade center for fertilizer, small tractors, used farm equipment, and pesticides. The use of fertilizer and small tractors by gardeners in the small cropped area of *Singapore* is also growing.

The United States and Japan supply most of *Singapore's* imports of fertilizer. West Germany and the United Kingdom supply most of the imported pesticides. *Singapore* imports from 600 to 800 tractors annually, mostly from the United Kingdom, Japan, and the United States.

Malaysia a cash market

Malaysia is a prosperous cash market for exporters of agricultural inputs in Western Europe, the United States, and Japan. Exports of nitrogenous fertilizer by Japan to *Malaysia* jumped from 35 tons in 1968 to 26,193 tons in 1969 with a value of \$1 million. About 97 percent of the shipments went to West *Malaysia*, 2 percent to Sabah, and 1 percent to Sarawak. Nitrogenous fertilizers account for about 60 percent of the fertilizer used in *Malaysia* and potash for about 35 percent. Total use of fertilizer is approaching 100,000 nutrient tons annually.

The use of fertilizer and small tractors in *South Vietnam* has increased rapidly in the last 3 years. Programs to increase the area in high-yielding varieties of rice have included larger supplies of imported fertilizer.